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Excel 2013 for Social Sciences Statistics: A Guide to Solving Practical Problems, Excel for Statistics

Thomas J. Quirk
Springer-Verlag, Switzerland, 2015.
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Excel 2013 for Social Sciences Statistics: A Guide to Solving Practical Problems shows students and people outside of education how to use **Excel** to work with a small but useful sub-set of statistical methods. The emphasis of the book – as the title would suggest – is on learning to use **Excel** rather than on statistical theory.

The book's eight chapters deal with the following subjects: Chapter 1: *Sample Size, Mean, Standard Deviation and Standard Error of the Mean*, Chapter 2: *Random Number Generator*, Chapter 3: *Confidence Interval about the Mean Using the TINV Function and Hypothesis Testing*, Chapter 4: *One-Group t-Test for the Mean*, Chapter 5: *Two-Group t-Test of the Difference of the Means for Independent Groups*, Chapter 6: *Correlation and Simple Linear Regression*, Chapter 7: *Multiple Correlation and Multiple Regression* and Chapter 8: *One-Way Analysis of Variance (ANOVA)*. There are five appendices which include the following material: answers to the problems which accompany each chapter (Appendix A), a practice test together with answers (Appendices B and C), formulae (Appendix D) and a *t* table (Appendix E). The book is also available as an ebook in either PDF or EPUB formats.

In terms of readership, the book may suit students who are taking introductory university courses in social sciences as well as pre-university courses for people on basic statistics and IT courses. It may also be useful for practitioners – like social workers or service managers – who collect data in order to reflect on the efficacy of their work. With a focus on the use of **Excel** to perform a small number of statistical techniques, the interested reader will however have to supplement this text with other material. Fortunately, Quirk helps the reader by providing a useful list of references at the end of each chapter.

The book is also well written in a way which walks the reader carefully through the steps which are required to produce the statistics which he describes. Good quality screenshots are liberally sprinkled throughout the text which both complement the written explanations and allow the reader to see how to design an **Excel** worksheet. Each chapter tends to build on previous material so I would suggest that a sequential reading of the text would be most

beneficial. Any formulae which are used are clearly presented and any mathematical terminology is kept to a minimum which makes the book very accessible. The practice problems are taken from a range of disciplines including sociology, psychology and anthropology thereby ensuring that the book appeals to an interdisciplinary readership. These problems have been well chosen and are simultaneously challenging whilst not being too difficult for a neophyte readership. A similar comment applies to the practice test which should only be tackled after reading the entire book. Quirk also shows how to install the **Analysis Toolpak** for **Excel** 2003, 2007, 2010 and 2013 and how to use the toolpak to perform a simple regression and ANOVA.

I do however feel that the book could benefit from the inclusion of an additional chapter or two on some very common features of **Excel** which are useful to aspirant social science researchers. In particular, some detail on file types and the import and export of data would be beneficial as would short tutorials on basic visualization. (The author does show how to produce scatterplots when discussing simple regression but I think that additional material on other chart types would have been helpful too).

In a similar vein, the author could have described those statistical functions which are relevant to the topics addressed in the book and which appear in **Excel** 2013. One might, for example, have expected to see a short tutorial on the use of the `T.INV.2T` and `T.INV` functions rather than the `TINV` function. Additional material could also have been included on the comparative capabilities of **Excel** by version type for experienced users who have used **Excel** before but who need to see how **Excel** 2013 differs from previous iterations.

All in all, I think that this a a good book for readers without any knowledge of either **Excel** or statistics. Its “step-by-step” approach and avoidance of much specialized terminology will certainly appeal to an audience who perhaps lack confidence that they can understand and work with statistics to answer problems which are pertinent to their own needs. In particular, the book could be a very useful resource for non-academic colleagues who are interested in research and/or evaluation but who do not have access to, or knowledge of, **SPSS**, **Stata** or **R** as well as social scientists who are in the very early stages of their undergraduate career.

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